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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/633,681	08/07/2000	Dieter Thelen	3896	3613

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EXAMINER	
BELLAMY, TAMIKO D	
ART UNIT	PAPER NUMBER
2855	7

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/633,681	THELEN ET AL.	
	Examiner	Art Unit	
	Tamiko D. Bellamy	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/7/00* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1–5, 7-10, 14, 16, 18-21, 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himmer et al. (4,691,567) in view of Manus (4,250,756).

As to claim 1, Himmer et al discloses a mounting plate 14 extending along and defining a plate plane (Fig2 (11, 14), col. 2 lines 30-34), a mounting fixture 1 arrange on a mounting plate 14(Fig. 2 (1,14), col. 2, lines 17-18), an outer frame 12 arranged at least partially outwardly around the mounting plate 14(Fig. 2(12,14), col. 2 lines 31-33), a plurality of webs 15 and 16, 17 and 18 connecting the mounting plate 14 to the outer frame 12 (Fig.2 (12,14,15,16,17,18), col. 2, lines 33-40), a first vibration transducer 5 arranged and adapted to detect translational vibration (Fig. 2 (5), abstract, col. 2, lines 25-29, 63-68, col. 3, lines 1-8). As to claim 2, Himmer et al discloses webs that are configured and arranged to define a pivot axis perpendicular to said rotation axis (abstract) (Fig 1 (16,17), Fig 2 (15,16,17,18), col. 2, lines 33-40. As to claim 3, Himmer et al discloses a second and third vibration transducers 7-10 arranged and adapted to detect pivot vibration (Fig. 2 (7-10), abstract, col. 2, lines 63-68, col. 3, lines 1-8). As to claim 5, Himmer et al. discloses a first vibration transducer arrangement that has a first measuring axis coincident with the pivot axis (Fig.2 (5)). As to claim 9, Himmer et al. discloses a third vibration transducer 8 arranged coupled to the outer frame 12 and the mounting frame 14 (Fig.2 (8, 12,

14), col. 2, lines 60-64). As to claim 10, Himmer et al. discloses a pivot axis that always lies in a plate plane (Fig 2(1,14), col. 2, lines 60-68)). As to claim 11, Himmer et al. discloses a second pair of webs 15 and 16 that respectively extend parallel to each other and located respectively spaced equidistantly from a pivot axis (Fig 2 (15,16)). As to claim 12, Himmer et al. discloses a second pair of webs each respectively comprise a flexible sectional bar member having a square cross-sectional shape (Fig 2 (15,16), col. 4, lines 5-8). As to claims 13 and 17, a second pair of webs that each respectively one notch (Fig 2 (15,16)). As to claim 14, Himmer et al. discloses a second pair of webs 17 and 18 pair arranged axially aligned on opposite sides of the mounting plate (Fig.2 (17,18), col.4, lines 5-13). As to claim 15, Himmer et al. further discloses a second pair of webs 17 and 18 that extend perpendicular to the pivot axis on respectively opposite sides of the mounting plate (Fig.2 (17,18), col.4, lines 5-13). As to claim 18, Himmer et al. discloses rotational axis substantially vertically and a plate plane that is substantially horizontally (Figs. 1 and 2, col. 2, lines 40-43). As to claim 19, Himmer et al. discloses rotational axis substantially horizontal (Figs. 1 and 2, col. 2, lines 40-43). As to claim 20, Himmer et al. discloses a first pair of webs 15 and 16 that extend along an intersection of the plate plane (Fig. 2 (15,16)). As to claim 21, Himmer et al. discloses webs of the first pair each respectively having a cross-sectional that is flexurally stiff in a direction to resist bending (col. 2, lines 55-57). As to claim 23, Himmer et al. discloses a mounting plate is connected and supported relative to an outer frame (col. 2, lines 37- 40). As to claim 24, Himmer et al discloses a mounting plate, webs, and outer frame that are integrally formed with one another (col. 2, lines 46-48). As to claim 26, Himmer et al. discloses a method of separately detecting at least one of said pivotal vibration and said translational vibration (col. 2, lines 60-68, col. 3, lines 1-8). Himmer et al. does not clearly

disclose a rotational body (cl. 1), a first vibration transducer arrangement that has a first measuring axis perpendicular to the pivot axis and the rotational axis (cl. 4), a second vibration transducer arrangement that has a second measuring axis perpendicular to a plate plane and offset from the pivot axis (cl. 4), a mounting plate that comprises a plate body and extension arm protruding outwardly from the plate body (cl. 6), a vibration transducer connected to the outer frame and elastically flexibly bendable coupling rod connected to the mounting plate (cls.7 and 25), a vibration transducer that is adjustably secured to the outer frame (cl. 8), a third pair of webs that respectively extend parallel to each other and located respectively spaced equidistantly from a pivot axis (cl. 11), a third pair of webs each respectively comprise a flexible sectional bar member having a square cross-sectional shape (cl. 12), a third pair of webs that each respectively one notch (cls.13 and 17), a third pair of webs pair arranged axially aligned on opposite sides of the mounting plate(cl. 14), a third pair of webs that extend perpendicular to the pivot axis on respectively opposite sides of the mounting plate (cl. 15), a mounting plate with rectangular plane shape (cl. 16), a plate plane that is substantially vertically (cl. 19), a cross-sectional shape which is a rectangular cross-sectional shape (cl. 22). However, Himmer et al. does make use of a central mandrel 3 that could be used as a rotational body (Fig.1 (3), col. 2, lines 17, 30-37; 60-63), and a second pair of webs each respectively comprise a flexible sectional bar member having a square cross-sectional shape which could very well be rectangular cross-sectional shape by designers preference. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Himmer et al. to use a first vibration transducer arrangement that has a first measuring axis perpendicular to the pivot axis a and the rotational axis and a second vibration transducer arrangement that has a second measuring axis

perpendicular to a plate plane and offset from the pivot axis for the purpose of providing an apparatus that operates more precisely while being manufactured more easily (col.1 lines 45-47), a third pair of webs for the purpose providing an apparatus that is more flexible under rotation (col. 2, line 56), and a web with a across-sectional shape which is a rectangular cross-sectional shape for the purpose of providing more flexibility under rotation with respect to stress and bending (col. 2, lines 56-57) .

As to claim 1, Manus discloses a rotational body1 (Fig. 1(1, 6, 25, 27), col. 4, lines 34-40, 57-60). As to claim 4, Manus discloses a first vibration transducer arrangement that has a first measuring axis perpendicular to the pivot axis and the rotational axis (Fig. 1 (12), col. 3, lines 64-68, col. 4, lines 1-2),col. 5, lines 16-22), and a second vibration transducer arrangement that has a second measuring axis perpendicular to a plate plane and offset from the pivot axis (Fig. 1(13), col. 3, lines 51-64). As to claims 7 and 25, Manus discloses a vibration transducer 12 connected to the outer frame 30 and elastically flexibly bendable coupling rod connected to the mounting plate 15 (Fig. 1 (12), Fig. 2(12, 15, 30), col. 3, lines 25-27). As to claim 8, Manus discloses a vibration transducer that is adjustably secured to the outer frame 21B (Fig 4(21B), col. 6, lines31-37). As to claim 16, Manus discloses a mounting plate with rectangular plane shape (Fig 2 (15), col. 5, lines 7-9). As to claim 19, Manus discloses a plate plane that is substantially vertically (Fig.1 (10, 16), col. 4, line 48-49). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Himmer et al to include the teachings of Manus for the purpose of providing an apparatus that obtains the most error-free imbalance measurement (Manus, col. 2, lines 35-37).

Claims 6,11-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himmer et al. (4,691,567) in view of Manus (4,250,756) as applied to claims 1–5, 7-10, 14, 16, 18-21, 23-26 above, and further in view of Meyer et al. (4,640,138).

Himmer et al. as modified by Manus, does not teach a mounting plate that comprises a plate body and extension arm protruding outwardly from the plate body (cl. 6), a third pair of webs that respectively extend parallel to each other and located respectively spaced equidistantly from a pivot axis (cl. 11), a third pair of webs each respectively comprise a flexible sectional bar member having a square cross-sectional shape (cl. 12), a third pair of webs that each respectively one notch (cls.13 and 17), a third pair of webs pair arranged axially aligned on opposite sides of the mounting plate(cl.14), a third pair of webs that extend perpendicular to the pivot axis on respectively opposite sides of the mounting plate (cl. 15). However, As to claim 6, Meyer et al. discloses a mounting plate that comprises a plate body and extension arm protruding outwardly from the plate body 25 (Fig.1 (25,35), col. 3, lines 1-5). As to claim 11, Meyer et al. (4,640,138) discloses a load sensitive transducer (abstract), a third pair of webs 36 that respectively extend parallel to each other and located respectively spaced equidistantly from a pivot axis (Fig. 1(36)). As to claim 12, Meyer et al. discloses a third pair of webs 36 that each respectively comprise a flexible sectional bar member having a rectangular cross-sectional shape (Fig. 1(36)). As to claims 13 and 17, Meyer et al. discloses a third pair of webs that each respectively one notch (Fig. 1(36)). As to claim 14, a third pair of webs 36 pair arranged axially aligned on opposite sides of the mounting plate 25 (Fig 1 (25,36), col. 3, lines 30-35). As to claim 15, Meyer et al. discloses a third pair of webs 36 that extend perpendicular to the pivot axis on respectively opposite sides of the mounting plate (Fig.1 (36), col. 3, lines 14-19). It would have been obvious

at the time the invention was made to a person having ordinary skill in the art to modify Himmer et al. as modified by Manus, with the limitations taught by Meyer et al., to provide a mounting plate that comprises a plate body and extension arm protruding outwardly from the plate body for the purpose of separating the center portion from the outer housing (Meyer et al., col. 3, lines3 4-36), and a third pair of webs for the purpose of flexing easily about the axes and bending easily under forces perpendicular to the plane (Meyer et al., col. 3, lines 14-17).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (703) 305-4971. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ben Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Tamiko Bellamy
T.B.
June 7, 2002

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